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Editorial

Challenges of Training in Pulmonary Medicine in India

Pulmonology has globally faced a larger number of challenges in its growth than its sister specialities of medicine. The confusion is reflected in the very use of an array of terms used for its nomenclature (Table 1), while several of these terms are not commonly used in India.[1] Consensus has somehow eluded in spite of the felt-need for an universally acceptable terminology. There is further compounding of confusion because of the lack of standardisation of requirements of attributes for training. There is an unfinished debate on the issue of treating pulmonology as a sub-(or super-) speciality of medicine.

Table 1. Nomenclature used globally for pulmonology

Pulmonary Medicine	Respirology
Thoracic Medicine	Pneumonology
Respiratory Medicine	Pneumology
Chest Medicine	Bronchology
Lung Medicine	Lungology Pulmology

Courses in India

We in India have suffered from the dichotomy of training in pulmonary diseases. The deficiencies have been long recognised for over two decades.[2-5] Traditionally, postgraduate courses in pulmonology have been offered after completion of graduate training (MBBS) in India in the form of either a diploma (2-year DTCD course) or an MD (3-year course) in tuberculosis/chest diseases/respiratory diseases/thoracic medicine (etc). The curricula of both the courses were heavily weighed in favour of tuberculosis (TB). More recently, the curricula have been expanded to include other respiratory diseases. The Medical Council of India (MCI) and the National Board of Examinations now recognise different courses with different durations of training in India (Table 2).[6,7]

Table 2. Different courses recognised by the Medical Council of India and National Board of Examinations

Diploma in TB and Respiratory Diseases	MBBS + 2 years
MD (TB and Respiratory Diseases/ Pulmonary Medicine)	MBBS + 3 years
DNB (Respiratory Diseases)	MBBS + 3 years
DM (Pulmonary Medicine)	MBBS + MD (3 years) + 3-year course
DM (Pulmonary Medicine and Critical Care Medicine)	As at 4

TB=Tuberculosis; MBBS=Bachelor of Medicine and Bachelor of Surgery; MD=Doctor of Medicine; DNB=Diploma in National Board: DM=Doctorate of Medicine

Pulmonary Medicine as a Super-speciality

Pulmonary Medicine, all over the world is essentially one of the subspecialities (in India, commonly referred as super-specialities) of Medicine. In the United States, an applicant for a fellowship in pulmonary (or any other subspeciality) must be previously certified in internal medicine by the American Board of Internal Medicine (ABIM).[8] This is also the case in India for super-specialities, such as Cardiology, Nephrology, Gastroenterology, Neurology and others.

Training in internal medicine is important for a super-speciality fellow to appreciate and understand the relationship of different diseases and their managements in a comprehensive manner rather than in isolation. The internal medicine training in multiple medical disciplines allows a specialist to rationalise the clinical approach to a patient, comprehend the multiple diagnoses and illnesses, and broaden the scope of management. It also helps in overall assessment, recognition and management of systemic diseases involving the lungs as well as the systemic manifestations of pulmonary diseases. A pulmonologist with internal medicine background will be better suited to analyse the data from ultrasonography, computed scanning (CT), computed tomography (CT), magnetic resonance imaging and other roentgenological investigations including the perfusion and positron emission tomography of not only the lungs but also of other systemic organs. He/She will be more familiar with comprehensive interpretation of immunological, pathological and haemodynamic parameters of systemic, in addition to those of pulmonary illnesses.

Objectives and Curriculum[9,10]

There has been a vast expansion of scope of pulmonary illnesses intersecting multiple specialities. A pulmonologist these days need to engage with a bit of several other sub-specialities, especially rheumatology and immunology, cardiology and cardiothoracic surgery, environmental and occupational medicine, aviation and diving medicine, oncology, sleep medicine and many others.[9,10] Respiratory critical care in itself is a major component of pulmonary medicine. It includes the mandatory components of cardio-pulmonary resuscitation, intubation and mechanical respiratory supports. Lungs constitute an important target of damage of most of the life-threatening diseases with mechanical ventilation as the prime focus of critical care management. It is, therefore, important to include critical care as an integral component of pulmonology subspeciality programmes.

A pulmonologist should also possess the skill to perform diagnostic tests and therapeutic interventions in addition to the cognitive knowledge of diseases and their management. This is particularly so with reference to lung function testing, bronchoendoscopic and pleural procedures. There are a few debatable areas, such as vascular catheterisation and therapeutic interventions. Similarly, thoracoscopy, mediastinoscopy and sleep studies also lie at the borders of the speciality. Decisions on several such overlapping issues are best taken depending upon the availability of local set-up and expertise.

Respiratory care is another crucial subject which lies in the realms of pulmonary medicine. It involves the technical application of inhalational and nebulisation procedures, oxygen therapy, respiratory physiotherapy, patient education, respiratory exercises and other forms of pulmonary rehabilitation. While these modes of therapy are administered by trained technicians and nurses, the pulmonologist must be able to prescribe, guide and supervise the ongoing therapy. There is lack of availability of these training courses in India. One, however, hopes to see their growth in near future.

Tuberculosis and other respiratory infections continue to pose a major health threat. Fortunately, with the Revised National Tuberculosis Control Programme (RNTCP) in place, TB is now on the national health-agenda. It shall continue to bother pulmonologists more than the internists and other speciality physicians. Pulmonogists must engage themselves with TB and RNTCP as one of their prime curricular and practice need.

Need for Thoracic Surgery

There is a worrying lack of availability of thoracic surgery in the country. This is a big barrier in the training of pulmonologist. It also reflects a gross deficiency of service to our patients. A vast majority of patients suffering from infections, TB, lung cancer and other pulmonary diseases, who can benefit from surgery, are unable to get appropriate treatments. There is an urgent and imperative need to develop thoracic surgery with separate programmes and fellowships. Fortunately, MCh (Thoracic Surgery) is a recognised degree by the Medical Council of India. In view of the heavy cardiac burden in the combined cardio-thoracic surgery programmes, the cardio-thoracic surgeon get little time to accommodate thoracic surgical patients. Moreover, the surgical management of thoracic problems, such as empyemas, abscesses and tumours, is completely different from management of coronary vascular and cardiac diseases. Availability of routine thoracic surgery will act as a major boost for training of pulmonologists.

In conclusion, pulmonology has travelled a long road and come to occupy an eminent place in parallel and along with other important medical super-specialities. These are the challenging times for respiratory medicine because of the rising burden of lung diseases.[11] The pulmonologists need to face the challenge through motivation, hard work and continuous updating. We all should remember what the *Red Queen said to little Alice: "….it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that". (Lewis Carroll).*

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